

WHAT IS CLAIMED IS:

1. A data transmission interface compatible with USB 1.0, USB 1.1 or USB 2.0 protocols and comprising at least following interface signals: V_{BUS} , D0+, D0-, D1+, D1- and GND signals, D0+, D0- are one differential signal set, D1+, D1- are another differential signal set, V_{BUS} offers interface power, GND connects to ground.

2. The data transmission interface recited in claim 1, wherein said GND connects to ground for noise isolation purposes.

3. The data transmission interface recited in claim 1, wherein said differential signal sets D0+, D0- and D1+, D1- are designed into Master-Slave structure, said D0+, D0- is Master and said D1+, D1- is Slave, said Master signals D0+, D0- are responsible for coordination USB 1.0, USB 1.1 or USB 2.0 interfaces as well as data transmission.

4. The data transmission interface recited in claim 3, wherein said Master differential signal set D0+, D0- and said Slave differential signal set D1+, D1- jointly complete DCUSB interface transmission.

5. The data transmission interface recited in claim 3, wherein said Slave differential signal set D1+, D1- are responsible for data transmission.

6. The data transmission interface recited in claim 4, wherein said Master differential signal set D0+, D0- and said Slave differential signal set D1+, D1- apply Chirp sequence to complete the transmission protocol, the Chirp sequence comprises of a plurality of Chirp J and Chirp K, Chirp J in said Master signal set is D0+=1 and D0-=0, Chirp J in said Slave signal set is D1+=1 and D1-=0, Chirp K in said Master signal set is D0+=0 and D0-=1, Chirp K in said Slave signal set is D1+=0 and D1-=1.

7. The data transmission interface recited in claim 3, wherein said Master differential signal set and said Slave differential signal set are not synchronous in

time, when data transmission error occurs in one of said differential signal sets, the interface controller stops sending out data but continues sending out the same Data packet until the interface controller on the reception side receives correct data and sends out Handshake packet.

5 8. A Dual Channel Universal Serial Bus (DCUSB) device is compatible with USB protocol transmission interface and comprises of two data transmission channels, every said channel further comprises of two differential signals, the structure consists of a interface controller with data conversion and transmission functions.

10 9. The Dual Channel Universal Serial Bus (DCUSB) device recited in claim 8, wherein said interface controller consists at least of a Differential receiver and a current driver, said Differential receiver and said current driver connect to differential signals of interface channels through proper circuitry.